PROGRESS

OF

MEDICAL SCIENCE.

MEDICINE.

UNDER THE CHARGE OF
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On the Acquisition of Tolerance to Salvarsan by Treponema Pallidum.—GAUCHER and GUGGENHEIM (*Bull. et mém. Soc. méd. d. hôp. de Paris.* 1911, xiii, 174) have made a careful clinical study of cases of lues treated with "606," which would tend to throw light on the alleged power of treponema pallidum to acquire arsenic resisting properties such as Ehrlich found for trypanosomes. In considering some cases treated originally with hectine or with repeated "606," they conclude that the proportion of partial or complete failures is not greater than in a large series of cases, and that certain complete cures with "606" have been reported after extensive preliminary arsenic treatment. Further cases so treated and resistant to "606," have been cured by further exhibition of the very drug through which they have acquired tolerance. While many injections of "606" may result in a tolerance, such an issue is rare. In the discussion, it seemed to be the consensus of opinion that for obstinate cases 0.5 gr. followed after five days by 0.6, then by 0.7 for men, intravenously, then a rest for ten days, and further similar treatment of 0.5 and 0.6 gave the best results. This prevented rapid excretion and also tended against massive doses, so that the organism was continually saturated.

Importance of Testing for Isoagglutinins Before Transfusion.—OTTENBERG (*Jour. of Exper. Med.*, 1911, xiii, 425) relates experiments on isoagglutinins which are interesting in view of the increasing number of transfusions lately reported in addition to the number of treatments of severe anemias and hemorrhagic states with defibrinated blood. He records Schultz's recent observations on injections of defibrinated blood in severe anemias where the first patient whose blood was hemolyzed and agglutinated by that of the donor suffered marked collapse, whereas those wherein there was not this reaction showed little or no effects in the majority of cases. He feels that intravascular agglutination may occur from the donor's blood, but that it may give rise to no symptoms. The process may be influenced by (1) concentration of the agglutinin; (2) absorption of the agglutinin by excess of the agglutinable cells; (3) interference with agglutination by excess of non-agglutinable cells whereby the clumps are made small. In case a non-agglutinative donor cannot be obtained, he feels it would be better to use a donor whose serum agglutinates the donee's cells rather than one whose cells are agglutinated by the patient's serum. He concludes that serum tests should be done when possible, but that as agglutinable cells are destroyed by phagocytosis, their use in transfusion is but slight.

Experimental Sarcoma of the Fowl.—PEYTON ROUS (*Jour. of Exper. Med.*, 1911, xiii, 397) reports progress with his transmissible sarcoma of the fowl. He has succeeded in producing the tumor in normal hosts by a cell-free filtrate passed through a Berkefeld filter. This growth from the cell-free filtrate has furnished tumors capable of producing new tumors after injection. The tumor is a spindle-celled sarcoma growing by amitosis. The transplantation from filtrate takes much longer to appear than that from grafts. It has now reached such a stage of malignancy that it can be transplanted to other varieties of chicken, but not in other species of animal. Metastases, too, are becoming much more frequent and larger.

Salvarsan in Syphilitic Meningitis.—DU CASTEL and PARAF (*Bull. et mém. Soc. méd. d. hôp. de Paris*, 1911, xxviii, 252) discuss acute secondary syphilitic meningitis arising in a patient who exhibited secondary genital lesions in September, 1909, and came in for mercurial treatment in February, 1910. After a clinical cure, in nine months she was readmitted with intense headache, vomiting, pain in the back, and constipation. She was rigid, with a slow pulse and a temperature of 103°. Kernig's sign was positive. The reflexes of the upper extremity were retained, whereas those of the lower were lost. There were secondary lesions in the mouth and hyperplasia of the cervical glands. Lumbar puncture showing a cell count of 53 per c.mm., and the Wassermann test being positive, she was given 0.4 gr. of "606," intravenously, and in thirty-six hours her temperature fell to normal, the headache disappeared, and one day later the cervical rigidity was gone. Three days later the return of headache and persistence of clinical signs caused the administration of 0.3 gr. intramuscularly. After two more days Kernig's sign was negative, but the reflexes were still abolished. While the Wassermann reaction was growing less marked daily, the cerebrospinal lymphocytosis persisted, and a threatened return of the Wassermann led to a further injection of 0.3 gr. of "606" intravenously, and benzoate of mercury treatment. Thus, three injections of "606" have led to a more rapid improvement of acute signs than would mercury, but have not been sufficient to reëstablish reflexes, nor to suppress the cerebrospinal lymphocytosis, a more certain sign of meningitis than is the Wassermann.